

## CHAPTER 4. MINIMUM EQUIPMENT LISTS (MEL) AND CONFIGURATION DEVIATION LISTS (CDL)

### SECTION 1. GENERAL

**1065. BACKGROUND.** MEL procedures were developed to allow the continued operation of an aircraft with specific items of equipment inoperative under certain circumstances. The Federal Aviation Administration (FAA) has found that for particular situations, an acceptable level of safety can be maintained with specific items of equipment inoperative for a limited period of time, until repairs can be made. The MEL document describes the limitations that apply when an operator wishes to conduct operations when certain items of equipment are inoperative. In 1964, the FAA established and adopted the MEL program for Federal Aviation Regulations (FAR) Part 121 operations. In 1978, FAR Part 135 multiengine aircraft operations were included in the MEL program; in 1991, FAR Part 135 single-engine operations were included.

**1067. GENERAL.** Section 1 of this chapter contains definitions and a general overview of the MEL system. Section 2 contains information on the development and approval process of master minimum equipment lists (MMEL). Section 3 contains information and guidance on developing and approving MEL's. Section 4 contains information and guidance for aviation safety inspectors (ASI) on MEL use during operations. Section 5 contains information and guidance for ASI's on how the master minimum equipment list subsystem (MMEL Subsystem) works as an automated method to retrieve the MMEL. Section 6 contains information about the development, approval, and usage of the CDL. Certain FAA technical groups, boards, and national resources related to these topics are referred to throughout this chapter; detailed guidance about these groups may be found in volume 8, chapter 3.

**1069. APPLICABILITY.** This chapter applies to those operators operating N-registered aircraft in accordance with FAR Parts 121, 129, and 135. Separate guidance exists for MEL's for FAR Parts 91 and 125 operators in FAA Order 8700.1, "General Aviation Operations Inspector's Handbook."

**1071. POI's RESPONSIBILITIES.** The principal operations inspector (POI) is the primary FAA official responsible for the overall process of administering, evaluating, and approving an operator's MEL. It is essential that the POI work with the principal maintenance inspector (PMI), the principal avionics inspector (PAI), and other individuals or groups involved in this process. Should the POI require additional TECHNICAL information related to a specific MEL ITEM, he or she should consult the Flight Operations Evaluation Board (FOEB) chairman responsible for the aircraft.

**1073. DEFINITIONS.** The following definitions are used throughout this chapter:

A. *Aircraft Evaluation Group (AEG).* The AEG is the Flight Standards point of contact with aircraft certification and is responsible for the development, revision and publication of an MMEL for those aircraft within its area of responsibility.

B. *Airplane Flight Manual (AFM)/Rotorcraft Flight Manual (RFM).* The approved flight manual is the document approved by the responsible FAA aircraft certification office (ACO) during type certification. The approved flight manual for the specific aircraft is listed on the applicable type certificate data sheet. The approved flight manual is the source document for operational limitations and performance parameters for an aircraft. The term, approved flight manual, can apply to either an AFM or an RFM. The FAA requires an approved flight manual for aircraft type certification.

C. *The Aircraft Maintenance Manual (AMM).* The AMM is the source document for aircraft maintenance procedures. The term AMM can apply to either an airplane or a rotorcraft manual. The FAA requires an AMM for aircraft certification.

D. *Air Transportation Division Bulletin Board System (BBS).* The Air Transportation Division operates an electronic BBS that is available to the public and all FAA elements. The BBS was established to provide MMEL policy information and cur-

rent MMEL's to the public. The BBS is accessible to anyone with a standard personal computer and modem. The BBS will accept data communication at up to 14,400 baud on 4 data lines simultaneously. The telephone number for the BBS is (202) 267-5231.

*E. Air Transport Association of America (ATA) Specification 100.* ATA Specification 100, Manufacturer's Technical Data, is an international industry numbering standard developed to identify systems and components on different aircraft in the same format and manner.

*F. Configuration Deviation List (CDL).* Aircraft certified under the provisions of Civil Air Regulations (CAR) 4b, FAR Parts 23 or 25, and intended for use under FAR Parts 121 or 135 may be approved for operations with missing secondary airframe and engine parts. The aircraft source document for such operations is the CDL. The ACO grants approval of the CDL under an amendment to the type certificate. For U.S.-certificated aircraft, the CDL is incorporated into the limitations section of the approved flight manual as an appendix.

*G. Flight Operations Evaluation Board (FOEB).* An FOEB is a board of FAA personnel assigned for each type of aircraft. The FOEB is composed of FAA personnel who are operations, avionics, airworthiness, and aircraft certification specialists. The FOEB develops an MMEL for a particular aircraft type under the direction of the AEG and the Air Transportation Division, AFS-200.

*H. Flight Operations Policy Board (FOPB).* The FOPB develops FOEB and flight standardization board (FSB) policy recommendations, which are approved by the Air Transportation division manager.

*I. Inoperative.* Inoperative means that a system or component has malfunctioned to the extent that it does not accomplish its intended purpose and/or is not consistently functioning normally within its approved operating limits or tolerances.

*J. Master Minimum Equipment List (MMEL).* The MMEL is a list of equipment that the FAA has determined may be inoperative under certain operational conditions and still provide an acceptable level of safety. The MMEL contains the conditions, limitations and procedures required for operating the aircraft with these items inoperative. The MMEL is used as a starting point in the development and review of an individual operator's MEL.

*K. MMEL Subsystem.* The MMEL Subsystem is a computerized component of the Aviation Safety Analysis System (ASAS), which automates the process of creating, revising, approving, and distributing MMEL's.

*L. Minimum Equipment List (MEL).* The MEL is derived from the MMEL and is applicable to an individual operator. The operator's MEL takes into consideration the operator's particular aircraft configuration, operational procedures and conditions. When approved and authorized for use, the MEL permits operation of the aircraft under specified conditions with certain inoperative equipment.

*M. Proposed Master Minimum Equipment List (PMMEL).* The PMMEL is a list developed by the manufacturer or operator that is submitted to the FOEB as a basis for the development of an MMEL.

**1075. PURPOSE OF MEL.** The FAR permits the authorization of an MEL if the Administrator finds that compliance with all the aircraft equipment requirements is not necessary in the interest of safety for a particular operation. Through the use of appropriate conditions or limitations, the MEL provides for improved scheduled reliability and aircraft utilization with an equivalent level of safety. This process is possible because of the installation of additional and redundant instruments, equipment and/or systems in present transport aircraft. Without an approved MEL, inoperative equipment would ground the airplane until repair or replacement of the nonfunctioning equipment. An MEL is approved for a specific make and model of aircraft, and the use of it is authorized by its operations specifications (OpSpecs).

**1077. ITEMS LISTED ON THE MEL.** There are three categories of items that may be contained in the operator's MEL:

- MMEL items
- Passenger convenience items
- Administrative control items

*A. MMEL Items.* The MEL will list all of the MMEL items for which the operator seeks relief and that are appropriate for its operation. The operator, by not listing at its discretion certain items in its MEL, may be more restrictive than permitted by the MMEL.

*B. Passenger Convenience Items.* The passenger convenience items, as contained in the operator's approved MEL, are those related to passenger convenience, comfort, or entertainment, such as, but not limited to, galley equipment, movie equipment, in-flight phones, ashtrays, stereo equipment, and overhead reading lamps. It is incumbent on the operator and the POI to develop procedures to ensure that those inoperative passenger convenience items are not used. Passenger convenience items do not have fixed repair intervals. Items addressed elsewhere in the MMEL shall not be authorized relief as a passenger convenience item. "M" and "O" procedures may be required and should be developed by the operator,

approved by the POI, and included in the air carrier's appropriate document.

*C. Administrative Control Items.* An operator may use an MEL as a comprehensive document to control items for administrative purposes. In such cases, the operator's MEL may include items not listed in the MMEL; however, relief may not be granted for these items unless conditions and limitations are contained in approved documents other than the MMEL or meet the regulatory requirements of the FAR. Examples of items considered to be administrative control items would be cockpit procedure cards, medical kits, delaminated windshields, and life vests.

**1079. TIMELY REPAIR OF ITEMS THAT ARE INOPERATIVE.** The MEL is intended to permit the operation of an aircraft with certain inoperative items for a limited period of time until repairs can be accomplished. The operator is responsible for establishing a controlled and effective repair program.

*A. Repair Interval.* Operators must make repairs within the time period specified by the MEL. Although the MEL might permit multiple days of operation with certain inoperative equipment, operators must repair the affected item as soon as possible.

*B. Day of Discovery.* The day of discovery is the calendar day an equipment malfunction was recorded in the aircraft maintenance log or record. This day is excluded from the calendar days or flight days specified in the MMEL for the repair of an inoperative item of equipment. This provision is applicable to all MMEL items, such as categories "A," "B," "C," and "D." The operator and the POI must establish a reference time in which the calendar day or flight day begins and ends 24 hours later. This reference time is established to ensure compliance with timely repair of equipment and items.

*C. MMEL Definitions.* More than one set of MMEL definitions exist due to years of evolving changes during which not all MMEL's have been updated to the latest revision of the definitions. However, only one set of definitions may be used with a specific MMEL. The most up-to-date definitions reside in Flight Standards Policy Letter 25 and may be obtained off the AFS-200 BBS. Only certain portions of the latest definitions may be appropriate for a specific air carrier's MEL. Definitions found in global changes, such as administrative control and repair intervals, may be adopted by the operator.

*D. Continuing Authorizations.* Approval of an MEL authorizes an operator to use a continuing authorization to approve extensions to the maximum repair interval for category "B" and "C" items, provided the responsible Flight Standards District Office (FSDO) is notified within 24 hours of the operator's exercise of extension authority. The certificate holder is not authorized to extend the maximum repair time for category "A" and "D" items, as specified in the approved MEL. Misuse of the continuing authorization may result in an amendment of the operator's OpSpecs by removing the operator's authority to use an MEL.

**1081. RECORDKEEPING.** When an item of equipment becomes inoperative, the operator must report it by making an entry in the aircraft maintenance record, as prescribed by FAR Parts 121 and 135.

**1083. MULTIPLE ITEMS THAT ARE INOPERATIVE.** Individual MEL requirements are designed to provide coverage for single failures en route. When operating with multiple inoperative items, the operator should consider the interrelationships between those items and the effect on aircraft operation and crew workload, including consideration of a single additional failure occurring en route.

**1085. FLEET APPROVAL.** An operator who has a single MEL for multiple aircraft may reflect equipment in its MEL that is not installed on all aircraft in its fleet. In this case, the item's title in the operator's MEL need not reference any specific airplane identification (usually registration number) unless the operator determines that there is need to do so. See AFS-200 Policy Letter 70 for additional information.

**1087. MEL REVISIONS.** Refer to section 2.

**1089. ACCESS TO MEL.** The FAR require that the MEL be carried aboard the aircraft or that the flightcrew have direct access to the MEL information prior to flight. Other means of direct access require approval.

**1091. CONFLICT WITH OTHER FAA-APPROVED DOCUMENTS.** The MEL may not conflict with other FAA-approved documents such as the approved flight manual limitations and airworthiness directives (AD). The operator's MEL may be more restrictive than the MMEL, but under no circumstances may the operator's MEL be less restrictive.

**1092.-1104. RESERVED**

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